What is claimed is:

1. A process for the in-situ fabrication of a metal insulator metal (MIM) capacitor on a substrate, the method comprising sequential steps of:

reacting a metal precursor at least once with a nitrogen source to form a first metal nitride electrode on the substrate;

reacting the metal precursor at least once with an oxidant to form a dielectric layer on the first metal nitride electrode; and

reacting the metal precursor at least once with the nitrogen source to form a second metal nitride electrode on the substrate.

2. A. process according to claim 1, wherein the step of forming the dielectric layer on the first metal nitride electrode further comprises the step of reacting the metal precursor at least once with the nitrogen source to form a metal oxynitride dielectric layer on the first metal nitride electrode.

3. A. process according to claim 1, further comprising the steps of:

after forming the first metal nitride electrode, reacting the metal precursor at least once with the oxidant and the nitrogen source to form a first metal oxynitride interposer layer on the first metal nitride electrode; and

after forming the dielectric layer, reacting the metal precursor at least once with the oxidant and the nitrogen source to form a second metal oxynitride interposer layer on the dielectric layer.

4. A substrate produced by processing according to the method of claim1, 2 or 3.

5. A process according to claim 1, wherein the process is an ALD or MOCVD process.

6. A process according to claim 5, wherein the metal precursor is a metal amide or metal imide selected from the group consisting of Zr, Ti, Hf, Ta, V, and Nb.

7. A process according to claim 5, wherein the metal precursor is a metal amide or metal imide selected from the group consisting of W and Mo.

8. A process according to claim 5, wherein the nitrogen source is selected from the group consisting of ammonia, atomic nitrogen, hydrazine, or primary, secondardy, and tertiary alkyl amines.

9. A process according to claim 5, wherein the oxidant is selected from the group consisting of oxygen, ozone, atomic oxygen, nitrous oxide, or hydrogen peroxide.

10. A process according to claim 5, wherein the metal precursor is a metal amide of the form:

$$M(NR^1R^2)_n$$

where M is the metal element, N is nitrogen, and R^1 and R^2 are, independently, selected from the following groups: hydrogen, substituted or un-substituted linear, branched, cyclic, and aromatic alkyls and n is 4 or 5.

11. A process according to claim 10, wherein the metal element M is selected from the group consisting of Zr, Ti, Hf, Ta, V, Nb, W and Mo.

12. A process according to claim 5, wherein the metal amide precursor is of the form:

$$(R^3\text{-}N=)_m M'(NR^4R^5)_p$$

where M is the metal element, and R^3, R^4, and R^5 are, independently, selected from the following groups: hydrogen, substituted or un-substituted linear, branched, cyclic and aromatic alkyls.

13. A process according to claim 12, wherein the metal element M is selected from the group consisting of Zr, Ti, Hf, Ta, V, Nb, W and Mo.

14. A process according to claim 13, wherein *m* is 1 and *p* is 3 when M is either Ta or Nb.

15. A process according to claim 13, wherein *m* is 2 and *p* is 2 when M is either W or Mo.

16. A substrate produced by processing according to the method of claims 6, 7, 8, 9, 10, 11 or 12.